METHOD, SYSTEM, AND GRAPHICAL USER INTERFACE FOR TEXT ENTRY WITH PARTIAL WORD DISPLAY

TECHNICAL FIELD

[0001] The disclosed embodiments relate generally to portable electronic devices, and more particularly, to a method, system, and graphical user interface for entering text on a portable electronic device.

BACKGROUND

[0002] As portable electronic devices become more compact, and the amount of information to be processed and stored increases, it has become a significant challenge to design a user interface that allows users to easily interact with the device. This is unfortunate because the user interface is the gateway through which users receive not only content but also responses to user actions or behaviors, including user attempts to access a device's features or tools. Some portable electronic devices (e.g., mobile telephones, sometimes called mobile phones, cell phones, cellular telephones, and the like) have resorted to adding more pushbuttons, increasing the density of push buttons, overloading the functions of pushbuttons, or using complex menu systems to allow a user to access, store and manipulate data. These conventional user interfaces often result in complicated key sequences and menu hierarchies that must be memorized by the user.

[0003] The interfaces for entering text that are currently available suffer the same shortcomings. Users of portable devices often have to enter text using keys or buttons that are overloaded with multiple letters or with buttons that do not correspond to any letter in particular. With these keys or buttons, entering just one letter can take multiple key or button presses. This makes the text entry process cumbersome and inefficient.

[0004] Accordingly, there is a need for more efficient interfaces for entering text on a portable device.

SUMMARY

[0005] The present invention reduces the problem described above by providing a method, system, and graphical user interface for text entry with partial word display. As used herein, a "partial word" is a character sequence of two or more characters that is less than a complete word and which may be presented to a user for selection, thereby increasing the speed of the text entry process.

[0006] According to some embodiments, a computer-implemented method includes receiving an input sequence of one or more characters; identifying one or more candidate sequences that satisfy predefined usage frequency criteria with respect to the input sequence, wherein each candidate sequence includes a concatenation of the input sequence and one or more additional characters and wherein the candidate sequences include partial words; and presenting the partial words.

[0007] According to some embodiments, a graphical user interface includes an input sequence of one or more characters, the input sequence corresponding to an input by a user; and one or more candidate sequences that satisfy predefined usage frequency criteria with respect to the input sequence, wherein each candidate sequence includes a concatenation of the input sequence and one or more additional characters and wherein the candidate sequences include partial words.

[0008] According to some embodiments, there is a computer program product for use in conjunction with a portable electronic device. The computer program product comprises a computer readable storage medium and a computer program mechanism embedded therein. The computer program mechanism includes instructions for receiving an input sequence of one or more characters; instructions for identifying one or more candidate sequences that satisfy predefined usage frequency criteria with respect to the input sequence, wherein each candidate sequence includes a concatenation of the input sequence and one or more additional characters and wherein the candidate sequences include partial words; and instructions for presenting the partial words.

[0009] According to some embodiments, there is a portable electronic device. The device includes a display; one or more processors; memory; and a program, wherein the program is stored in the memory and configured to be executed by the one or more processors. The program includes instructions to receive an input sequence of one or more characters; instructions to identify one or more candidate sequences that satisfy predefined usage frequency criteria with respect to the input sequence, wherein each candidate sequence includes a concatenation of the input sequence and one or more additional characters and wherein the candidate sequences include partial words; and instructions to present the partial words.

[0010] According to some embodiments, there is a portable electronic device. The device includes display means; one or more processor means; memory means; and a program mechanism, wherein the program mechanism is stored in the memory means and configured to be executed by the one or more processors means. The program mechanism includes instructions for receiving an input sequence of one or more characters; instructions for identifying one or more candidate sequences that satisfy predefined usage frequency criteria with respect to the input sequence, wherein each candidate sequence includes a concatenation of the input sequence and one or more additional characters and wherein the candidate sequences include partial words; and instructions for presenting the partial words.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] For a better understanding of the aforementioned embodiments of the invention as well as additional embodiments thereof, reference should be made to the Description of Embodiments below, in conjunction with the following drawings in which like reference numerals refer to corresponding parts throughout the figures.

[0012] FIG. **1** is a block diagram illustrating a portable electronic device in accordance with some embodiments.

[0013] FIG. **2**A illustrates a portable communications device having a physical click wheel input device in accordance with some embodiments.

[0014] FIG. **2**B illustrates a portable communications device having a virtual click wheel input device in accordance with some embodiments.

[0015] FIGS. **3**A-**3**B are a flow diagram illustrating a process of selecting and providing candidate character sequences in response to text input in accordance with some embodiments.

[0016] FIG. **4** illustrates a conceptual diagram of a character sequence usage frequency tree in accordance with some embodiments.